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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/855,863	05/14/2001	Reinhold Geiselhart	DE920000017US1	1179
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KUNZLER & ASSOCIATES 8 EAST BROADWAY SUITE 600 SALT LAKE CITY, UT 84111			LU, KUEN S	
			ART UNIT	PAPER NUMBER
			2167	

DATE MAILED: 03/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/855,863

Applicant(s)

GEISELHART, REINHOLD

Examiner

Kuen S Lu

Art Unit

2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 October 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-7, 12-23 and 28-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 12-23 and 28-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### **Response to Amendments**

1. The Action is responsive to the Applicant's Amendments, filed on October 26, 2004.
2. The Applicant's amendments made to the claims 1-2, 7, 13-14, 17-18 and 29-32 are noted. Concerning the amendments to every of independent claims 1, 13 and 17, new issues were raised when the limitations "gathering at least one rank criterion from the user for the context information" and "ranking the documents, based at least in part on the at least one rank criterion" were amended to "weighting the presented context information by the user through input" and "ranking the documents, based at least in part on the at least in part of the user-weighted context information", respectively. New issues were also raised when "weighting the user-weighted context information" was introduced to replace "at least one rank criterion" in the limitation for each of claims 2, 18, 29 and 31. Based on the above issues, the Examiner has cited one new, additional reference in the Office Action for Final Rejection, as shown next.
3. As for the Applicant's Remarks on claim rejections, filed on October 26, 2004, has been fully considered by the Examiner, please see discussion in the section **Response to Arguments**, following the Office Action for Final Rejection.

### **Claim Rejections - 35 USC § 102**

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1-2, 13-14, 17-18 and 29-32 are rejected under 35 U.S.C. 102(e) as anticipated by Aalbersberg (U.S. Patent 6,094,648).

As per Claims 1, 13 and 17, Aalbersberg teaches the following:

"gathering context information from the documents" (See Figs. 4-5, col. 5, lines 37-39 and col. 6, lines 19-21 wherein Aalbersberg's query result of documents and full view of a document are displayed is equivalent to Applicant's gathering context information from the documents);

"presenting the context information to a user" (See Figs. 4-5, col. 5, lines 37-39 and col. 6, lines 19-21 wherein Aalbersberg's query result of documents and full view of a document are displayed is equivalent to Applicant's presenting the context information to a user);

"weighting the presented context information by the user through input" (See col. 7, line 23-67 and col. 8, lines 1-45 wherein Aalbersberg's documents are searched and retrieved based on query terms, query terms are weighted to calculate the similarity between documents, sort the documents, and user can return to an earlier step to perform the steps of weighting terms, calculate similarity and sort documents is equivalent to Applicant's weighting the presented context information by the user through input); and

“ranking the documents, based at least in part on the at least in part of the user-weighted context information” (See col. 7, line 23-67 and col. 8, lines 1-45 wherein Aalbersberg’s documents are searched and retrieved based on query terms, query terms are weighted to calculate the similarity between documents, rank the documents by sorting similarity and storing the results in results database, and user can return to an earlier step to perform the steps of weighting terms, calculate similarity and sort documents is equivalent to Applicant’s ranking the documents, based at least in part on the at least in part of the user-weighted context information).

As per Claims 2, 14 and 18, Aalbersberg teaches “revising the weighting the user-weighted context information, in response to user input and re-ranking the documents based on the revised weighting the user-weighted context information” (See col. 7, line 23-67 and col. 8, lines 1-45 wherein Aalbersberg’s documents are searched and retrieved based on query terms, query terms are weighted to calculate the similarity between documents, rank the documents by sorting similarity and storing the results in results database, and user can return to an earlier step to perform the steps of weighting terms, calculating similarity and sorting documents is equivalent to Applicant’s revising the weighting the user-weighted context information, in response to user input and re-ranking the documents based on the revised weighting the user-weighted context information).

As per Claims 29 and 31, Aalbersberg teaches "where in the weighting the user-weighted context information comprises a plurality of rating levels" (See col. 7, line 23-67 and col. 8, lines 1-45 wherein Aalbersberg's documents are searched and retrieved based on query terms, query terms are weighted by moving slides for a continuous basis of levels to calculate the similarity between documents, rank the documents by sorting similarity and storing the results in results database, and user can return to an earlier step to perform the steps of weighting terms, calculating similarity and sorting documents is equivalent to Applicant's where in the weighting the user-weighted context information comprises a plurality of rating levels).

As per Claims 30 and 32, Aalbersberg teaches "the documents are ranked without communicating with a search engine that located the documents" (See col. 7, line 23-67 and col. 8, lines 1-45 wherein Aalbersberg's searched results are ranked by sorting similarity of documents and stored in results database, and user can return to an earlier step after the query to perform ranking documents by sorting similarity is equivalent to Applicant's the documents are ranked without communicating with a search engine that located the documents).

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3, 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aalbersberg (U.S. Patent 6,094,648), as applied to claims 1-2, 13-14, 17-18 and 29-32 above, and in view of Schuetze (U.S. Patent 5,675,819).

As per claims 3, 15 and 19, Aalbersberg teaches gathering and presenting context information and further gathering criteria to rank retrieved information as previously described in claims 1-2, 13 and 17 rejection under 35 U.S.C. 102.

Aalbersberg does not specifically teach extracting lexical affinities from the documents.

However, Schuetze teaches determining and extracting lexical co-occurrence of terms at col. 6, lines 5-8 and 20-25.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to include Schuetze's teaching Aalbersberg' because both references are devoted to improve accuracy of retrieving documents. The combination of the references would have improved overall precision of information system for precisely retrieving relative documents from a corpus of documents.

8. Claims 4, 5, 1/2/4/6, 1/2/5/6, 1/2/6, 1/6, 1/2/4/6/7, 1/2/5/6/7, 1/2/6/7, 1/6/7, 16, 20, 21, 17/18/20/22, 17/18/21/22, 17/18/22, 17/22, 17/18/20/22/23, 17/18/21/22/23, 17/18/22/23 and 17/22/23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aalbersberg (U.S. Patent 6,094,648), as applied to claims 1-2, 13-14, 17-18 and 29-32 above, and further in view of Marchisio (U.S. Pub. 2002/0156763).

As per Claims 4 and 20, Aalbersberg teaches gathering and presenting context information and further gathering criteria to rank retrieved information as previously described in claims 1-2, 13 and 17 rejection under 35 U.S.C. 102.

Aalbersberg does not specifically teach "features extraction".

However, Marchisio teaches at Fig. 3, elements 31-39, col. 6-7, [0065], lines 1-20.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to include Marchisio's teaching on features extraction with Aalbersberg' for providing additional functions such as detecting acronyms and recognizing specific HTML, SGML or XML tags to the users of Aalbersberg' system.

As per claims 5 and 21, Aalbersberg teaches gathering and presenting context information and further gathering criteria to rank retrieved information as previously described in claims 1-2, 13 and 17 rejection under 35 U.S.C. 102.

Aalbersberg does not specifically teach "extracting word frequency statistics from the documents".

However, Marchisio teaches "gathering context information comprises extracting lexical affinities from the documents" at col. 4, [0034], lines 18-20.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to include Marchisio's teaching on calculating word frequency with Aalbersberg' document retrieval system. The teaching would have enabled Aalbersberg' system to count the occurrences of individual search terms.



Based on the statistics, the system would have allowed users to identify the higher hit search terms for improving the search syntax.

As per claims 1/2/4/6, 1/2/5/6, 1/2/6, 1/6, 16, 17/18/20/22, 17/18/21/22, 17/18/22 and 17/22, Aalbersberg teaches gathering and presenting context information and further gathering criteria to rank retrieved information as previously described in claims 1-2, 13 and 17 rejection under 35 U.S.C. 102.

Aalbersberg does not specifically teach using a weighting function to weight the context information, although Aalbersberg teaches weighting the context information as previously described in claims 1, 13 and 17 rejections.

However, Marchisio teaches using a weighting function at col. 3, [0031], line 4 through [0032], line 14.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Marchisio's reference with Aalbersberg' because both are devoted to improve the performance of document retrieval. Measuring the similarity between query and document searching vectors through weighting function is a tool allow users of Aalbersberg' system to better sense the relative importance of the terms used in the document search and retrieval.

As for claims 1/2/4/6/7, 1/2/5/6/7, 1/2/6/7, 1/6/7, 17/18/20/22/23, 17/18/21/22/23, 17/18/22/23 and 17/22/23, Marchisio teaches "utilizing discrete ranking levels in said weighting step" at Fig. 1, steps 12-13 and col. 8, lines 7-19 where the weighting step

sorting document weights based on a predetermined ordering, such as in decreasing order of similarity to the user query.

9. Claims 12 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aalbersberg (U.S. Patent 6,094,648) as applied to claims 1-2, 13-14, 17-18 and 29-32 above, and further in view of Fagin et al. (U.S. Patent 6,014,664).

As per claims 12 and 28, Aalbersberg teaches gathering and presenting context information and further gathering criteria to rank retrieved information as previously described in claims 1-2, 13 and 17 rejection under 35 U.S.C. 102.

Aalbersberg does not specifically teach increasing the weight of higher rankings or decreasing the lower ones in order to increase the distance between the ranking scores.

However, Fagin specifically and clearly teaches scoring function, weighting rule, weighting adjustment and combined scoring functions, among others, through columns 9, 10 and 11.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Fagin's reference with Aalbersberg' because both are devoted to improve the accuracy and relevance of query terms such that more desired and only the highest ranked documents would have been retrieved. Combining the two teachings would have allowed users to enter more flexible queries and obtained highly re-ranked, but a smaller set of documents.

10. Claims 1/2/3/6, 17/18/19/22, 1/2/3/6/7 and 17/18/19/22/23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aalbersberg (U.S. Patent 6,094,648) in view of Schuetze (U.S. Patent 5,675,819), as applied to claims 3, 15 and 19 above, and further in view of Marchisio (U.S. Pub. 2002/0156763).

As per Claims 1/2/3/6 and 17/18/19/22, the combined Schuetze-Aalbersberg reference teaches extracting lexical affinities from information as previously described for claims 3, 15 and 19 rejection.

The combined Schuetze-Aalbersberg reference does not specifically teach "weighting of the context information by a weighting function".

However, Marchisio does at col. 3, [0031], line 4 through [0032], line 14.

It would have been obvious to one having ordinary skill in the art at the time of the applicant's invention was made to combine Marchisio's reference with Aalbersberg' because both are devoted to improve the performance of document retrieval. Measuring the similarity between query and document searching vectors through weighting function is a tool allow users of Aalbersberg' system to better sense the relative importance of the terms used in the document search and retrieval.

As per Claims 1/2/3/6/7 and 17/19/22/23, Marchisio teaches "utilizing discrete ranking levels in said weighting step" at Fig. 1, steps 12-13 and col. 8, lines 7-19 where the weighting step sorting document weights based on a predetermined ordering, such as in decreasing order of similarity to the user query.

***Response to the Arguments***

11. Applicant's arguments with respect to claims 1-7, 12-23 and 28-32 have been considered but are moot in view of the new ground(s) of rejection.

12. The prior art made of record

H. U.S. Patent No. 6,094,648

C. U.S. Patent No. 5,675,819

D. U.S. Publication 2002/0156763

E. U.S. Patent No. 6,014,664

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

A. U.S. Publication 2002/0103798

B. U.S. Patent No. 6,714,929

F. U.S. Patent No. 6,792,419

G. U.S. Patent No. 6,636,848

I. U.S. Patent No. 6,714,929

The prior art made of record, listed on form PTO-892, and not relied upon, if any, is considered pertinent to applicant's disclosure.

If a reference indicated as being mailed on PTO-FORM 892 has not been enclosed in this action, please contact Lisa Craney whose telephone number is (571) 272-3574 for faster service.

**Conclusions**

13. THIS ACTION IS MADE FINAL.

The Applicants are reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

**14.** The prior art made of record, listed on form PTO-892, and not relied upon, if any, is considered pertinent to applicant's disclosure.

If a reference indicated as being mailed on PTO-FORM 892 has not been enclosed in this action, please contact Lisa Craney whose telephone number is 571-272-3574 for faster service.

**15.** Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kuen S Lu whose telephone number is 571-272-4114. The examiner can normally be reached on 8 AM to 5 PM, Monday through Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on 571-272-4107. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.


Art Unit: 2167

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.

Kuen S. Lu

Patent Examiner

February 23, 2005

  
Luke Wassum

Primary Examiner

February 23, 2005